IN THE CLAIMS

1.(Previously Presented) An apparatus for controlling the position of a screen pointer for an electronic device having a display screen, the apparatus comprising:

a plurality of sensing elements against which a portion of the tip of a human digit may be placed; and

a controller coupled to each of the sensing elements for sensing an electrical property at each of the sensing elements, the controller configured to generate pixel values representing the portion of the tip of the digit placed against the sensing elements based on the sensed electrical property at each of the sensing elements, the controller configured to generate movement data based on a comparison of successively generated sets of the pixel values, the comparison including comparing a first one of the sets with at least one pixel shifted version of a second one of the sets, the movement data indicative of motion of the tip of the digit across the sensing elements.

2.(Original) The apparatus of claim 1, wherein the values are digital values.

3.(Original) The apparatus of claim 1, wherein the electrical property is impedance.

4.(Original) The apparatus of claim 1, wherein the electrical property is capacitance.

5.(Original) The apparatus of claim 1, wherein each sensing element includes a conductive layer.

6.(Original) The apparatus of claim 5, wherein each conductive layer is a metal.

7.(Original) The apparatus of claim 5, wherein each sensing element further includes a protective layer formed over the conductive layer.

8.(Original) The apparatus of claim 7, wherein each protective layer is an insulator.

9.(Original) The apparatus of claim 1, and further comprising a protective layer formed over the plurality of sensing elements.

10.(Original) The apparatus of claim 1, and further comprising a substrate, the plurality of sensing elements formed on the substrate.

11.(Previously Presented) The apparatus of claim 1, and further comprising a conductive rim formed around a perimeter of the plurality of sensing elements.

12.(Previously Presented) The apparatus of claim 11, wherein the controller further comprises an alternating current signal source coupled to the conductive rim for driving the conductive rim with an alternating current signal.

13.(Original) The apparatus of claim 12, wherein the controller further comprises an automatic gain controller coupled to the alternating current signal source for controlling the magnitude of the alternating current signal.

14.(Original) The apparatus of claim 4, wherein the controller further comprises an electronic shutter coupled to the plurality of sensing elements for controlling a charge accumulation time of the sensing elements.

15.(Original) The apparatus of claim 1, wherein the plurality of sensing elements are organized into a square array with a plurality of rows of sensing elements and a plurality of columns of sensing elements.

16.(Original) The apparatus of claim 15, wherein the number of rows and columns of sensing elements ranges between about 15 and 25.

17.(Original) The apparatus of claim 16, wherein the pitch of the plurality of sensing elements ranges between about 10 to 1000 microns.

18.(Original) The apparatus of claim 16, wherein the pitch of the plurality of sensing elements ranges between about 25 to 250 microns.

19.(Original) A method of controlling the position of a screen pointer for an electronic device having a screen display, the method comprising:

placing a portion of an appendage of the human hand against a plurality of sensing elements;

sensing an impedance at each of the sensing elements;

generating digital values representing the sensed impedance at each of the sensing elements, the digital values representing digital images of the portion of the appendage placed against the sensing elements;

correlating at least one version of a first one of the digital images with at least one version of a second one of the digital images to generate motion data indicative of motion across the sensing elements by the appendage; and

adjusting the position of the screen pointer in accordance with the motion data.

20.(Original) The method of claim 19, wherein the impedance is capacitance.

21.(Original) The method of claim 19, wherein each sensing element includes a conductive layer.

22.(Original) The method of claim 21, wherein each conductive layer is a metal.

23.(Original) The method of claim 21, wherein each sensing element further includes a protective layer formed over the conductive layer.

24.(Original) The method of claim 23, wherein each protective layer is an insulator.

25.(Original) The method of claim 19, wherein a protective layer is formed over the plurality of sensing elements.

26.(Original) The method of claim 19, wherein the plurality of sensing elements are formed on a substrate.

27.(Previously Presented) The method of claim 19, wherein a conductive rim is formed around a perimeter of the plurality of sensing elements, the method further comprising:

driving the conductive rim with an alternating current signal.

28.(Original) The method of claim 19, wherein the plurality of sensing elements are organized into a square array with a plurality of rows of sensing elements and a plurality of columns of sensing elements.

29.(Original) The method of claim 28, wherein the number of rows and columns of sensing elements ranges between about 15 and 25.

30.(Original) The method of claim 19, wherein the pitch of the plurality of sensing elements ranges between about 10 to 1000 microns.

31.(Original) The method of claim 19, wherein the pitch of the plurality of sensing elements ranges between about 25 to 250 microns.

32.(Previously Presented) The apparatus of claim 1, wherein the plurality of sensing elements are organized into an array with a plurality of rows of sensing elements and a plurality of columns of sensing elements, and wherein the array is less than about 2 millimeters by 2 millimeters.

33.(Previously Presented) The apparatus of claim 1, wherein the plurality of sensing elements are organized into an array with a plurality of rows of sensing elements and a plurality of columns of sensing elements, and wherein the array is a substantially square array with dimensions of about 1.5 millimeters by 1.5 millimeters.

34.(Previously Presented) The method of claim 19, wherein the plurality of sensing elements are organized into an array with a plurality of rows of sensing elements and a plurality of columns of sensing elements, and wherein the array is less than about 2 millimeters by 2 millimeters.

35.(Previously Presented) The method of claim 19, wherein the plurality of sensing elements are organized into an array with a plurality of rows of sensing elements and a plurality of columns of sensing elements, and wherein the array is a substantially square array with dimensions of about 1.5 millimeters by 1.5 millimeters.